



PATENT
0475-0193P

THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Holger HAUPTMANN et al. Conf.: 6560
Appl. No.: 09/890,804 Group: 1731
Filed: October 1, 2001 Examiner: J. M. HOFFMANN
For: METHOD FOR DIMENSIONALLY SINTERING CERAMICS

INFORMATION DISCLOSURE STATEMENT
(SUBMISSION AFTER FILING OF AN APPLICATION
BUT BEFORE FINAL REJECTION OR NOTICE OF ALLOWANCE
OR CONCURRENTLY WITH A RULE 1.114 RCE APPLICATION)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

October 7, 2004

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on the PTO-1449(s), attached hereto.

II. COPIES (check at least one box)

- a. ☒ This application was filed before June 30, 2003. Accordingly, submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- b. ☐ This application was filed on or after June 30, 2003. Accordingly, copies of cited U.S. patents and patent application publications therefore are not included. Copies of foreign patent documents and non-patent literature are included.

- c. ☐ Some or all of the documents listed on the PTO-1449 are not enclosed because they were cited in the International Search Report and copies should already be in the PTO file. If copies are needed, please contact the undersigned.

III. CONCISE EXPLANATION OF THE RELEVANCE
(check at least one box)

- a. ☒ **DOCUMENTS IN THE ENGLISH LANGUAGE**

The patents, publications, or other information listed on the attached PTO 1449 are in the English language and therefore, do not require a statement of relevancy.

- b. ☒ **DOCUMENTS NOT IN THE ENGLISH LANGUAGE**

A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

See below.

- c. ☐ **ENGLISH LANGUAGE SEARCH REPORT**

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(III)(A)(3).

- d. ☒ **OTHER**

The following additional information is provided for the Examiner's consideration.

U.S. Patent 6,106,747 is not relevant to the present application because it relates to the non-elected subject matter, wherein the ceramic firing material and the support material consist of the same material.

There is no English translation or equivalent available for DE 121 025. The support material described therein is coated with molybdenum, which interacts with the ceramic firing material.

The S. J. Rock et al. and H. E. Amaya references relate to aluminum oxide spheres as support materials.

The Renfert reference relates to the commercial product "mesh-tray", which is a ceramic mesh-like support in which carrier rods may be fixed. The carrier rods are not freely movable in order to adapt independently to the shrinkage dimensions of the firing material, which is around 20%. Further, this commercial support material cannot stand the firing temperatures, as it would melt together. The material is used for coating metal or ceramics with a glass-like coating at lower temperatures than the firing temperatures for ceramics. Except for thermal expansion, there is no sintering shrinkage.

The Modern Practice in Dental Ceramics reference uses granules as support material.

EP 0 583 620 relates to the non-elected subject matter, i.e., sintering of SiN articles in a particulate material which, in a preferred embodiment, consists also of SiN.

The VMK 95 and Kermaik heute references do not relate to movable supports that adapt independently to the shrinkage dimensions of the firing material which occurs during the firing process. The supports are fixed and are non-movable and do not adapt to the shrinkage dimensions.

FEEs

IV. ☒ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b):
(check one box)

- a. ☐ within three months of the filing date of a national application (37 C.F.R. § 1.97(b)(1)). No fee or statement is required. *(This section is not to be used with RCE's.)*
- b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or statement is required.
- c. ☒ concurrently with the filing of a Request for Continued Examination under § 1.114 (37 C.F.R. § 1.97(b)(4)). No fee or statement is required.
- d. ☐ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or statement is required.
In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the statement under 37 C.F.R. § 1.97(e) below, or, if no statement has been made, charge our deposit account in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

V. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c)(1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c)(2)).

- a. ☐ No statement; therefore, a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).
- or
- b. ☐ See the statement below. No fee is required.

VI. STATEMENT UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby states that

- a. ☐ **each item of information contained in the IDS was first cited in any communication from a foreign Patent Office in a counterpart foreign application not more than 30 days prior to the filing of this IDS; or**
- b. ☐ each item of information contained in the IDS was first cited in any communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- c. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the IDS.
- d. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was first cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application and, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

VII. PAYMENT OF FEES (check one box)

- ☐ A check in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p) is enclosed for the above-identified fee.
- ☐ Please charge Deposit Account No. 02-2448 in the amount required by 37 C.F.R. § 1.17(p) for the above-indicated fee. This paper is submitted in triplicate.
- ☒ No fee is required.

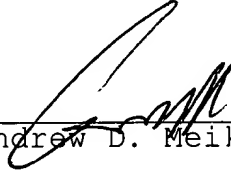
If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 02-2448.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By


Andrew D. Meikle, #32,868


ADM/ETP/las
0475-0193P

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Attachment(s): ☒ PTO-1449
☒ Documents
☐ Foreign Search Report
☐ Fee
☐ Other:

Form PTO-1449

**INFORMATION DISCLOSURE CITATION
IN AN APPLICATION**

(Use several sheets if necessary)

ATTY. DOCKET NO.
0475-0193PAPPLICATION NO.
09/890,804APPLICANT
Holger HAUPTMANN et al.FILING DATE
October 1, 2001GROUP
1731
U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	Kind	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	US 6,106,747	A	2000-08-22	Wohlwend			
	US						
	US						
	US						

FOREIGN PATENT DOCUMENTS

	Office	DOCUMENT NUMBER	Kind	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
								YES	NO
	DE	121 025		1975-08-19	GERMANY				
	EP	0 583 620	A1	1994-02-23	EUROPE				

OTHER DOCUMENTS

(Include Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.

	S. J. ROCK et al., "Distortion Control for P/M-Based Rapid Prototyping of Advanced Material Components", presented at 1996 World Congress on Powder Metallurgy & Particulate Materials, June 16-21, 1996, Washington, D.C. pp. 1-15
	H. E. AMAYA, "Size & Distortion Control in MIM Processing", Advances in Powder Metallurgy, Vol. 2, pp. 285-295, June 9, 1991
	Renfert, Katalog 97/98, p. 60
	"Modern Practice in Dental Ceramics", W.B. Saunders Company, Philadelphia and London, 1967, pp. 280-285, 290, 291
	VMK 95, VITA Zahnfabrik H. Rauter GmbH & Co. KG, printed 078/98 drawings
	Kermaik heute, VITA Zahnfabrik H. Rauter GmbH & Co., KG, printed 12/86, pp. 8, 9

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.